

Daimler Chrysler AG

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Patent Claims

1. A control system (1) for a motor vehicle, having
- a manual actuating means (3) with a plurality of
 - 10 degrees of freedom of adjustment for selecting and/or activating entries in a menu structure with a plurality of menu levels, and
 - a screen display (2) having one or more display areas (210 to 250) for displaying the menu
 - 15 structure, each of the display areas (210 to 250) each comprising at least one field for displaying one of the entries (1.1 to 5.7),
- characterized in that
- in order to display entries (E1 to E5, E1 to E9),
 - 20 a plurality of fields with a matrix structure (230.1, 230.2) composed of a plurality of columns (S1 to S5) and a plurality of rows (Z1 to Z9) which can each be selected by means of a cursor (231) are arranged in at least one menu level of
 - 25 the menu structure in at least one display area (230) of the screen display (2), just one entry (E1 to E5, E1 to E9) being arranged in each of the columns (S1 to S5) or in each of the rows (Z1 to Z9).
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2. The control system as claimed in claim 1, characterized in that the fields in the matrix (230.1, 230.2) can be filled by the user with entries from stored lists in a variable fashion.
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3. The control system as claimed in claim 1 or 2, characterized in that the matrix (230.1, 230.2) is configured as a virtual endless conveyor belt which can

be moved through under the cursor (231) by the manual actuating means (3) in accordance with the degree of freedom of adjustment in order to select one of the entries (E1 to E5, E1 to E9).

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4. The control system as claimed in claim 3, characterized in that the cursor (231) is configured as a fixed bar.

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5. The control system as claimed in one of claims 1 to 3, characterized in that the cursor (231) is configured as a movable bar and can be moved over the matrix (230.1, 230.2) by the manual actuating means (3) in order to select one of the entries (E1 to E5, E1 to E9).

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6. The control system as claimed in claim 5, characterized in that the cursor (231) can be moved over the matrix (230.1, 230.2) in order to select an entry within a predefined area, and it is stopped when one of the area boundaries is reached, this area being preferably three-sevenths of the possible movement area, the matrix (230.1, 230.2) being stationary if the movable cursor (231) is positioned within the predefined area, and the matrix (230.1, 230.2) moving through under the cursor (231) in accordance with the degree of freedom of adjustment if said cursor (231) reaches one of the area boundaries and the manual actuating means (3) continues to be actuated with the same degree of freedom of adjustment.

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7. The control system as claimed in claim 6, characterized in that the matrix (230.1, 230.2) is moved counter to the direction of movement of the cursor (231) by the same degree of freedom of adjustment of the actuating means (3) if the cursor (231) reaches one of the area boundaries or is positioned on the area boundary.

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8. The control system as claimed in one of claims 1 to 7, characterized in that the entries (E1 to E5) are displayed in adjacent columns (S1 to S5) in fields of different rows (Z1 to Z3) if the number of columns is greater than or equal to the number of rows.

9. The control system as claimed in claim 8, characterized in that the selection of one of the entries (E1 to E5) by moving the cursor (231) which is configured as a vertical bar or the matrix (230.1) which is configured as a virtual conveyor belt is carried out by means of a first or second or third or fourth degree of freedom of adjustment of the manual actuating means (3).

10. The control system as claimed in claim 9, characterized in that the display area (230) is exited by means of a fifth or sixth degree of freedom of adjustment of the manual actuating means (3).

11. The control system as claimed in one of claims 1 to 7, characterized in that the entries (E1 to E9) are displayed in adjacent rows (Z1 to Z9) in fields of different columns (S1, S2) if the number of columns is smaller than the number of rows.

12. The control system as claimed in claim 11, characterized in that the selection of one of the entries (E1 to E9) by moving the cursor (231) which is configured as a horizontal bar or the matrix (230.2) which is configured as a virtual conveyor belt is carried out by means of the fifth or the sixth or the third or the fourth degree of freedom of adjustment of the manual actuating means (3).

13. The control system as claimed in claim 12, characterized in that the display area (230) is exited

by means of the first or second degree of freedom of adjustment of the manual actuating means (3).

14. The control system as claimed in one of claims 1
5 to 13, characterized in that the selected entry (E1 to E5, E1 to E9) is activated by ending the movement or by means of an additional seventh degree of freedom of adjustment of the manual actuating means (3), the
10 respective entry (E1 to E5, E1 to E9) in whose field the cursor (231) is then positioned being activated.

15. The control system as claimed in claim 14,
characterized in that the selected and/or activated
15 entry is displayed graphically in a different way than the other entries.

16. The control system as claimed in claim 15,
characterized in that the selected and/or activated
20 entry can be displayed with a larger size and/or with a different color and/or with a higher intensity than the other entries.

17. The control system as claimed in one of claims 1
to 16, characterized in that the width of the
25 individual fields is dependent on the length of the longest entry (E1 to E5, E1 to E9) in the respective column.

18. The control system as claimed in one of claims 1
30 to 17, characterized in that the width of the individual fields is dependent on the number of columns.

19. The control system as claimed in one of claims 1
35 to 18, characterized in that the at least one display area (230) represents a radio function and the entries (E1 to E5, E1 to E9) in the fields correspond to radio stations (transmitter1 to transmitter5).

20. The control system as claimed in claim 19,
characterized in that the entries (E1 to E5, E1 to E9)
in the matrix (230.1) comprise radio stations
5 (transmitter1 to transmitter5) which can be received at
a particular time as a function of a user selection or
are stored in at least one transmitter list.